# 2005 Kansas Job Vacancy Survey Methodology



#### Sample

Information from the 2005 Job Vacancy Survey comes from a selected original sample of 4,681 firms from the Kansas Quarterly Census of Employment and Wages (QCEW) Program. This program maintains a quarterly database of non-agricultural employment from employers subject to the Kansas Unemployment Insurance Law. The sample was selected in January of 2005, using employer information taken from the records for the second quarter of 2004. It was stratified by major industry and size class to represent the universe of employers in the five Local Areas throughout the State of Kansas. The sample was drawn using software produced by the U.S. Department of Labor, Bureau of Labor Statistics (BLS), and was selected with a ten percent relative standard error and adjusted for a desired 60 percent response rate.

The universe for the survey sample included all employers in Kansas that employed at least one employee and included private employers, federal government, state government and local government employers.

Four firm sizes were used based upon the number of employees reported through the Kansas QCEW Program: Very Small (1-4 employees), Small (5-49), Medium (50-249) and Large (250 or more). When selecting the sample, certainty was given to the employers in the Large size.

Twenty major industry sectors, defined by the 2002 North American Industry Classification System (NAICS) are represented in the sample. Table 1 on the following page describes the major industry sectors.

Firms excluded from the sampling process included those in the private households, temporary help services, professional employer organizations and those firms with no employees.

A separate survey sample was drawn for each of the five Local Areas, considered as planning regions under the Workforce Investment Act (WIA). In addition, a special survey sample was drawn specifically for Shawnee County to obtain data necessary for the contract between LMIS and GO Topeka, a division of the Greater Topeka Chamber of Commerce.

## **Survey Instrument**

The survey was conducted over a three-month period from April 5, 2005 to June 30, 2005 (second quarter of 2005). A pre-survey postcard was mailed in March to firms selected in the sample. This postcard notification assisted analysts with the address correction process. The survey was mailed to 4,670 firms on April 5, 2005. Two additional survey mailings were sent to non-respondents on May 3, 2005 and May 27, 2005. Respondents were provided a postage paid return envelope, in addition to the option of responding via the Internet, fax or by phone. Follow-up telephone calls also were made to critical non-respondents from June 16 through June 30.

Employers surveyed were asked to provide information on current job vacancies at the time of the survey, therefore, these estimates are considered as point-in-time estimates. Survey respondents were asked to report job titles and the number of job vacancies for which they were recruiting. For each job title, they also were asked to provide education and experience requirements, wages and benefits offered and the length of time job vacancies had been open.

TABLE 1	
NAICS INDUSTRY	INDUSTRY DESCRIPTION
Agriculture, forestry, fishing and hunting	Firms engaged in growing crops, raising animals, harvesting timber, and harvesting fish and other animals from farms, ranches, or the animals' natural habitats.
Mining	Firms engaged in extracting naturally occurring mineral solids, such as coal and ore; liquid minerals, such as crude petroleum; and gases, such as natural gas; and beneficiating (e.g., crushing, screening, washing, and flotation) and other preparation at the mine site, or as part of mining activity.
Utilities	Firms engaged in generating, transmitting, and/or distributing electricity, gas, steam, and water and removing sewage through a permanent infrastructure of lines, mains, and pipe.
Construction	Firms engaged in erecting buildings and other structures (including additions); heavy construction other than buildings; and alterations, reconstruction, installation, and maintenance and repairs.
Manufacturing	Firms engaged in the mechanical, physical or chemical transformation of materials, substances or components into new products.
Wholesale trade	Firms engaged in selling or arranging for the purchase or sale of goods for resale; capital or durable nonconsumer goods; and raw and intermediate materials and supplies used in production, and providing services incidental to the sale of the merchandise.
Retail trade	Firms engaged in retailing merchandise generally in small quantities to the general public and providing services incidental to the sale of the merchandise.
Transportation and warehousing	Firms engaged in providing transportation of passengers and cargo, warehousing and storing goods, scenic and sightseeing transportation, and supporting these activities.
Information	Firms engaged in distributing information and cultural products, providing the means to transmit or distribute these products as data or communications, and processing data.
Finance and insurance	Firms involved in the creation, liquidation, or change in ownership of financial assets (financial transactions) and/or facilitating financial transactions.
Real estate and rental and leasing	Firms engaged in renting, leasing, or otherwise allowing the use of tangible or intangible assets (except copyrighted works), and providing related services.
Professional and technical services	Firms that perform professional, scientific, and technical services for the operations of other organizations.
Management or companies and enterprises	Firms engaged with the holding of securities of companies and enterprises, for the purpose of owning controlling interest or influencing their management decision, or administering, overseeing, and managing other establishments of the same company or enterprise and normally undertaking the strategic or organizational planning and decision making of the company or enterprise.
Administrative and waste services	Firms that perform routine support activities for the day-to-day operations of other organizations.
Educational services	Firms that provide instruction and training in a wide variety of subjects.
Health care and social assistance	Firms engaged with providing health care and social assistance for individuals.
Arts, entertainment and recreation	Firms that are engaged with operating or providing services to meet varied cultural, entertainment and recreational interests of their patrons.
Accommodation and food services	Firms that provide customers with lodging and/or preparing meals, snacks and beverages for immediate consumption.
Other services, except public administration	Firms engaged in providing services not elsewhere specified, including repairs, religious activities, grant making, advocacy, laundry, personal care, death care, and other personal services.
Government (or public administration)	Firms that include administration, management, and oversight of public programs by federal, state and local governments.

### **Job Titles**

Employers were asked to provide the names of the job titles that were currently open-for-hire. Analysts reviewed these job titles and matched them to a corresponding occupation using the Standard Occupational Classification (SOC) system. The SOC is a four-tiered structure with 821 detailed occupations within 22 major occupational groups. For the purposes of this study, occupational information is presented at both the major occupational group and detailed occupational levels. Major occupational groups are listed in Table 2.

Analysts were careful to match vague titles, such as "seasonal worker" to appropriate codes by contacting employers or examining detailed industry, wage, education and experience information. Questionable titles that could not be linked to a specific SOC code, mainly due to lack of detailed information, were placed in a more general occupational category. Results from this coding process resulted in 462 detailed occupations with reported job vacancies within the state.

TABLE 2	
MAJOR OCCUPATIONAL GROUP	SAMPLE OCCUPATION
Management	Restaurant Managers, Educational Administrators and Marketing Managers
Business and Financial Operations	Accountants, Loan Officers and Human Resource Specialists
Computer and Mathematical	Database Administrators, Programmer Analysts and Technical Support Specialists
Architecture and Engineering	Landscape Architects, Electrical Engineers and Draftpersons
Life, Physical and Social Science	Environmental Scientists, Geologists and Marketing Consultants
Community and Social Service	Rehabilitation Counselors, Case Managers and Social Workers
Legal	Attorneys, Legal Assistants and Abstractors
Education, Training and Library	Post Secondary Teachers, Special Education Teachers and Paraprofessionals
Art, Design, Entertainment and Media	Graphic Designers, Coaches and Editors
Healthcare Practitioners and Technical	Pharmacists, Registered Nurses and Medical Records Clerks
Healthcare Support	Certified Nurse Aides, Pharmacy Aides and Health Assistants
Protective Service	Correction Officers, Police Officers and Lifeguards
Food Preparation and Serving Related	Cooks, Waiters, Waitresses and Bartenders
Building, Grounds Cleaning, Maintenance	Janitors, Housekeepers and Landscaping Workers
Personal Care and Service	Child Care Workers, Cosmetologists and Recreation Workers
Sales and Related	Cashiers, Retail Salespersons and Telemarketers
Office and Administrative Support	Customer Service Representatives, Tellers and Receptionists
Farming, Fishing and Forestry	Greenhouse Laborers and Elevator Operators
Construction and Extraction	Construction Laborers, Carpenters and Plumbers
Installation, Maintenance and Repair	Auto Technicians, Maintenance Technicians and Millwrights
Production	Production Workers, Bakers and Welders
Transportation and Material Moving	Bus Drivers, Truck Drivers and Loaders

#### **Estimation**

Estimates were prepared for each of the five Local Areas. In addition, a special report was prepared specifically for Shawnee County for the contract between LMIS and GO Topeka. The counties that are in each Local Area are listed.

A total of 183 units in the sample were considered to be statewide employers and were not directly related to a particular county or location. The results from respondents in this group were included in the statewide estimates, but were not included in any estimates made for the Local Areas or for Shawnee County.

The sample software weighted each employer relative to others in the area in the same industry and of the same size. After the data collection was complete, the weight assigned to each firm was modified, based upon response status. This new weight was used to determine the estimate of the number of job vacancies for each occupation.

The Estimates Delivery System (EDS) provided occupational employment estimates for the State of Kansas, the five Local Areas and for Shawnee County. EDS is a system for producing occupational wage and employment statistics from the results of the annual Occupational Employment Statistics (OES). EDS is particularly useful because it allows for the calculation of employment within occupational groups and detailed occupations for user-defined areas, including the state. The most current employment data from EDS was used to assist with the calculation of the job vacancy rate by occupation. The benchmark employment used for this study was the average of the November 2003 employment and the May 2004 employment.

The NAICS system, described in the Sample Section of this Methodology Report, provided industry and size data to assist with the calculation of the job vacancy rate by industry and size.

EOCAL AREA I Barber Barton Chase Cheyenne Clark Cloud Comanche Decatur Dickinson Edwards Ellis Ellsworth Finney Ford Gove Graham Grant Gray Greeley Hamilton Harvey Haskell Hodgeman Jewell Kearny Kiowa Lane Lincoln	Meade Mitchell Morris Morton Ness Norton Osborne Ottawa Pawnee Phillips Pratt Rawlins Reno Republic Rice Rooks Rush Russell Saline Scott Seward Sheridan Sherman Smith Stafford Stanton Stevens Thomas	LOCAL AREA II Atchison Brown Clay Doniphan Douglas Franklin Geary Jackson Jefferson Marshall Nemaha Osage Pottawatomie Riley Shawnee Wabaunsee Washington  LOCAL AREA III Johnson Leavenworth Wyandotte	LOCAL AREA IV Butler Cowley Harper Kingman Sedgwick Sumner  LOCAL AREA V Allen Anderson Bourbon Chautauqua Cherokee Coffey Crawford Elk Greenwood Labette Linn Lyon Miami Montgomery Neosho Wilson
Lincoln Logan McPherson Marion			

Wichita

#### Wages

The respondents were asked to provide the expected compensation for each job opening. Annual compensation for full-time positions was converted to an hourly rate for the purposes of this study by dividing by 2,080 hours. Hourly wages for teachers were based on a nine and one-half month year, therefore, dividing the annual compensation by 1,647 hours.

The average hourly wage offer is based upon the responses employers provided to the wage offer question on the survey and does not reflect information from other sources or wages paid for currently filled positions. Some respondents did not report the expected wage compensation for the reported job openings, therefore, the average wage offer represents an average of the wage information available. The average wage offer does not include wage information for any occupations paid by special pay arrangements. For example, some truck drivers are paid a certain amount per load and some part-time post-secondary teachers are paid per credit hour.

The average wage offer may not include all monies received from tips since the amount of tip received is unknown. All wages reported below the federal minimum wage were adjusted to \$5.15 an hour when the occupation listed stated that tips were included. This is the case for particular occupations, such as a waitress, where the compensation reported by a respondent was \$2.13 an hour, plus tips. In cases such as this, \$5.15 was used to assist with calculating an average wage offer.

# **Survey Responses**

of the response rates.

Usable responses were received from 3,104 employers, a participation rate of 68 percent, resulting in statistically reliable data. Table 3 shows the response rate for each area. Tables 5 through 18 on the following pages, include totals for each area in each industry and size cell.

for each area in each industry and size cell.
A total of 61 sampled units across the state were found to be out of business and 53 units were determined to be out of scope. These units were removed from the sample and are not included in the calculation

The preferred method of response was by the postage paid envelope enclosed with the survey. A fax number and toll-free telephone number was provided to survey recipients who wished to utilize either of these two methods. A Web-based version of the survey was also available, giving respondents the option of either completing the online survey linked to the KDOL Web site or completing an electronic form and sending it in electronically to an e-mail address provided. Follow-up telephone calls were made during the third survey round to secure critical non-responses. Some responses were secured by obtaining information directly from the job postings found on the surveyed firm's Web site. Table 4 shows the percent of responses received by each available method.

TABLE 3			
AREA	ORIGINAL SAMPLE	USABLE	RESPONSE RATE
<u>STATEWIDE</u>	<u>4,681</u>	3,104	<u>68%</u>
Local Area I	940	662	72%
Local Area II	931	648	71%
Local Area III	1,279	799	65%
Local Area IV	874	594	69%
Local Area V	474	338	72%
Balance of State	183	63	36%
Shawnee County	376	271	74%

TABLE 4	
RESPONSE METHOD	USAGE
Mail	66%
Fax	11%
Telephone follow-up	9%
Web site job listings	5%
Internet	4%
Toll-free phone call	3%
E-mail	1%
Other	1%

TABLE 5			
STATEWIDE SIZE	SAMPLE BASE	USABLE	RESPONSE RATE
<u>TOTAL</u>	4,567	3,104	<u>68%</u>
Very Small (1-4 employees)	539	333	62%
Small (5-49 employees)	2,133	1,439	67%
Medium (50-249 employees)	1,307	907	69%
Large (250 or more)	588	425	72%

TABLE 6			
STATEWIDE INDUSTRY	SAMPLE BASE	USABLE	RESPONSE RATE
TOTAL	4,567	<u>3,104</u>	<u>68%</u>
Agriculture, forestry, fishing and hunting	75	52	69%
Mining	57	45	79%
Utilities	61	48	79%
Construction	285	187	66%
Manufacturing	503	346	69%
Wholesale trade	258	163	63%
Retail trade	610	389	64%
Transportation and warehousing	195	124	64%
Information	117	69	59%
Finance and insurance	223	155	70%
Real estate and rental and leasing	91	56	62%
Professional and technical services	230	145	63%
Management of companies and enterprises	63	47	75%
Administrative and waste services	184	117	64%
Educational services	257	211	82%
Health care and social assistance	502	361	72%
Arts, entertainment and recreation	91	66	73%
Accommodation and food services	379	230	61%
Other services, except public administration	153	100	65%
Government	233	193	83%

TABLE 7			
LOCAL AREA I SIZE	SAMPLE BASE	USABLE	RESPONSE RATE
<u>TOTAL</u>	<u>924</u>	<u>662</u>	<u>72%</u>
Very Small (1-4 employees)	90	62	69%
Small (5-49 employees)	483	329	68%
Medium (50-249 employees)	251	205	82%
Large (250 or more)	100	66	66%

TABLE 8			
LOCAL AREA I INDUSTRY	SAMPLE BASE	USABLE	RESPONSE RATE
TOTAL	<u>924</u>	<u>662</u>	<u>72%</u>
Agriculture, forestry, fishing and hunting	33	22	67%
Mining	18	15	83%
Utilities	11	8	73%
Construction	46	33	72%
Manufacturing	97	65	67%
Wholesale trade	51	40	78%
Retail trade	123	75	61%
Transportation and warehousing	37	24	65%
Information	20	12	60%
Finance and insurance	39	30	77%
Real estate and rental and leasing	10	7	70%
Professional and technical services	27	20	74%
Management of companies and enterprises	11	10	91%
Administrative and waste services	19	11	58%
Educational services	82	68	83%
Health care and social assistance	111	83	75%
Arts, entertainment and recreation	14	12	86%
Accommodation and food services	73	43	59%
Other services, except public administration	26	17	65%
Government	76	67	88%

TABLE 9			
LOCAL AREA II SIZE	SAMPLE BASE	USABLE	RESPONSE RATE
TOTAL	<u>917</u>	<u>648</u>	<u>71%</u>
Very Small (1-4 employees)	140	92	66%
Small (5-49 employees)	416	295	71%
Medium (50-249 employees)	252	174	69%
Large (250 or more)	109	87	80%

TABLE 10			
LOCAL AREA II INDUSTRY	SAMPLE BASE	USABLE	RESPONSE RATE
TOTAL	<u>917</u>	<u>648</u>	<u>71%</u>
Agriculture, forestry, fishing and hunting	13	10	77%
Mining	9	6	67%
Utilities	16	14	88%
Construction	58	36	62%
Manufacturing	89	66	74%
Wholesale trade	31	20	65%
Retail trade	122	79	65%
Transportation and warehousing	44	33	75%
Information	26	20	77%
Finance and insurance	41	28	68%
Real estate and rental and leasing	20	12	60%
Professional and technical services	41	27	66%
Management of companies and enterprises	16	15	94%
Administrative and waste services	27	18	67%
Educational services	55	46	84%
Health care and social assistance	107	72	67%
Arts, entertainment and recreation	22	16	73%
Accommodation and food services	79	48	61%
Other services, except public administration	37	27	73%
Government	64	55	86%

TABLE 11			
LOCAL AREA III SIZE	SAMPLE BASE	USABLE	RESPONSE RATE
<u>TOTAL</u>	<u>1,225</u>	<u>799</u>	<u>65%</u>
Very Small (1-4 employees)	91	52	57%
Small (5-49 employees)	561	370	66%
Medium (50-249 employees)	391	249	64%
Large (250 or more)	182	128	70%

TABLE 12			
LOCAL AREA III INDUSTRY	SAMPLE BASE	USABLE	RESPONSE RATE
TOTAL	1,225	<u>799</u>	<u>65%</u>
Agriculture, forestry, fishing and hunting	8	5	63%
Mining	8	6	75%
Utilities	12	8	67%
Construction	83	54	65%
Manufacturing	112	75	67%
Wholesale trade	96	51	53%
Retail trade	175	114	65%
Transportation and warehousing	48	34	71%
Information	32	16	50%
Finance and insurance	83	56	68%
Real estate and rental and leasing	28	19	68%
Professional and technical services	102	65	64%
Management of companies and enterprises	14	9	64%
Administrative and waste services	72	49	68%
Educational services	34	23	68%
Health care and social assistance	116	83	72%
Arts, entertainment and recreation	24	13	54%
Accommodation and food services	106	69	65%
Other services, except public administration	41	26	63%
Government	31	24	77%

TABLE 13			
LOCAL AREA IV SIZE	SAMPLE BASE	USABLE	RESPONSE RATE
TOTAL	<u>858</u>	<u>594</u>	<u>69%</u>
Very Small (1-4 employees)	79	56	71%
Small (5-49 employees)	412	287	70%
Medium (50-249 employees)	247	164	66%
Large (250 or more)	120	87	73%

TABLE 14			
LOCAL AREA IV INDUSTRY	SAMPLE BASE	USABLE	RESPONSE RATE
TOTAL	<u>858</u>	<u>594</u>	<u>69%</u>
Agriculture, forestry, fishing and hunting	7	5	71%
Mining	7	7	100%
Utilities	7	7	100%
Construction	66	49	74%
Manufacturing	108	74	69%
Wholesale trade	48	33	69%
Retail trade	120	80	67%
Transportation and warehousing	32	16	50%
Information	18	9	50%
Finance and insurance	34	28	82%
Real estate and rental and leasing	17	11	65%
Professional and technical services	39	20	51%
Management of companies and enterprises	9	7	78%
Administrative and waste services	43	28	65%
Educational services	41	37	90%
Health care and social assistance	105	75	71%
Arts, entertainment and recreation	17	15	88%
Accommodation and food services	81	51	63%
Other services, except public administration	30	20	67%
Government	29	22	76%

TABLE 15			
LOCAL AREA V SIZE	SAMPLE BASE	USABLE	RESPONSE RATE
TOTAL	<u>467</u>	338	<u>72%</u>
Very Small (1-4 employees)	70	43	61%
Small (5-49 employees)	197	137	70%
Medium (50-249 employees)	129	104	81%
Large (250 or more)	71	54	76%

TABLE 16			
LOCAL AREA V INDUSTRY	SAMPLE BASE	USABLE	RESPONSE RATE
TOTAL	<u>467</u>	<u>338</u>	<u>72%</u>
Agriculture, forestry, fishing and hunting	8	6	75%
Mining	8	6	75%
Utilities	11	7	64%
Construction	23	12	52%
Manufacturing	79	61	77%
Wholesale trade	19	13	68%
Retail trade	53	39	74%
Transportation and warehousing	21	13	62%
Information	15	9	60%
Finance and insurance	17	12	71%
Real estate and rental and leasing	7	5	71%
Professional and technical services	11	8	73%
Management of companies and enterprises	7	4	57%
Administrative and waste services	13	7	54%
Educational services	40	34	85%
Health care and social assistance	54	44	81%
Arts, entertainment and recreation	9	7	78%
Accommodation and food services	31	18	58%
Other services, except public administration	11	8	73%
Government	30	25	83%

TABLE 17			
SHAWNEE COUNTY SIZE	SAMPLE BASE	USABLE	RESPONSE RATE
TOTAL	<u>368</u>	<u>271</u>	<u>74%</u>
Very Small (1-4 employees)	69	50	72%
Small (5-49 employees)	157	115	73%
Medium (50-249 employees)	101	72	71%
Large (250 or more)	41	34	83%

TABLE 18			
SHAWNEE COUNTY INDUSTRY	SAMPLE BASE	USABLE	RESPONSE RATE
TOTAL	<u>368</u>	<u>271</u>	<u>74%</u>
Agriculture, forestry, fishing and hunting	6	4	67%
Mining	3	3	100%
Utilities	7	5	71%
Construction	21	15	71%
Manufacturing	34	25	74%
Wholesale trade	14	10	71%
Retail trade	47	33	70%
Transportation and warehousing	21	18	86%
Information	12	9	75%
Finance and insurance	19	13	68%
Real estate and rental and leasing	9	6	67%
Professional and technical services	17	12	71%
Management of companies and enterprises	8	7	88%
Administrative and waste services	12	9	75%
Educational services	14	11	79%
Health care and social assistance	42	29	69%
Arts, entertainment and recreation	9	6	67%
Accommodation and food services	27	18	67%
Other services, except public administration	16	12	75%
Government	30	26	87%

# Shawnee County Report Comparison With Previous Job Vacancy Surveys

This was the fifth year for LMIS to contract with GO Topeka, a committee of the Greater Topeka Chamber of Commerce, to conduct a job vacancy survey for Shawnee County. The methodology utilized for the surveys have varied, therefore, it is important to keep this in mind when comparing these survey results with previous surveys. The methodology for the 2005 Job Vacancy Survey was the same as the 2004 study, therefore making the comparison between these two years reliable.

Any modification made to the survey have been made in an effort to improve the reliability of the survey and the estimation method. In 2003, LMIS implemented survey techniques based on recommendations by a multi-state Job Vacancy Survey Consortium Group. In 2004, additional changes were made which included weighting each employer in the sample relative to others in the area in the same industry and of the same size. This weight was then used to determine the "estimate" of the number of job vacancies for those establishments not included in the study. Table 19 illustrates the survey differences.

TABLE 19					
SHAWNEE COUNTY ANNUAL COMPARISON	2001	2002	2003	2004	2005
Survey Sample	453	560	770	379	368
Number of Respondents	129	164	461	248	271
Response Rate	28%	29%	60%	65%	74%
Number of Mailings	1	1	4	3	3
Survey Date	1/5/01	4/4/02	4/4/03 to 6/13/03	4/7/04 to 7/7/04	4/5/05 to 6/30/05
Requested Information	Job vacancies paying over \$10.00 an hour	Job vacancies paying over \$12.00 an hour	All job vacancies	All job vacancies	All job vacancies
Estimation Methodology Used	none	none	none	yes	yes
Reported Job Vacancies	235	171	907	Not reported	Not reported
Total Job Vacancies	NA	NA	NA	2,165	1,955

#### For further information, contact:

Dorothy D. Stites, Director Labor Market Information Services Kansas Department of Labor 401 SW Topeka Blvd Topeka, KS 66603-3182 Phone: 785-296-5058

Fax: 785-296-5286 Web site: www.dol.ks.gov E-mail: dorothy.stites@dol.ks.gov